



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,886	09/30/2003	Christian Leth Petersen	00900.0302-US-C1	6811

7590 05/05/2005
Michael B. Lasky
Altera Law Group
Suite 100
6500 City West Parkway
Minneapolis, MN 55344-7704

EXAMINER

KOBERT, RUSSELL MARC

ART UNIT	PAPER NUMBER
----------	--------------

2829

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,886

Applicant(s)

PETERSEN ET AL.

Examiner

Russell M. Kobert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2005 and 08 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-130 is/are pending in the application.
- 4a) Of the above claim(s) 122-130 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 65-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0903
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

1. Applicant's election with traverse of Invention I, Species (a), claims 65-121, in the replies filed March 10, 2005 and April 8, 2005 is acknowledged. The traversal is on the ground(s) that the search for each of the groups and all the species is substantially the same and does not demand unreasonable use of PTO resources and that applicant paid the required claim fees for such PTO services. This is not found persuasive because **Applicants have not shown that the groups are not patentably distinct.** **Admission on the record by Applicants that the groups are not patentably distinct will result in rejoinder.** With regard to the "search of both groups and certainly all species is substantially the same and does not demand unreasonable use of PTO resources" argument, it is noted that each distinct invention beyond one is a burden in that it draws the attention of the Examiner to its own requirements. Examination requires focus to follow search leads and patterns of logic in formulating applications of the prior art to that which is claimed. When the Examiner has to pursue several search patterns of logic simultaneously or serially, added burden is presented. In order to examine several inventions and/or species simultaneously or serially, added effort beyond that necessary for one invention or species must be expended. Where the effort is serial and the jobs are different the added burden is obvious. For example, digging two equal holes of the same size requires twice the effort of digging one hole. Such is an obvious conclusion. It can be argued that some inventions or species can be examined simultaneously but such is true only if they are not patentably distinct, that is, **if that which applies to any one applies to all others** (emphasis added). Where inventions or species are patentably distinct each requires separate consideration. For

instance, consider a properly restrictable apparatus and method of use of that apparatus where one has details without correspondence in the other. Finding references anticipating or making obvious one does not necessarily render the other unpatentable. Having to examine the other constitutes a burden. If the apparatus and method of the above example are not patentably distinct no burden is presented in examining both since if one falls the other falls as well. As a second for instance, consider a properly restrictable combination and subcombination where all the details of the subcombination are not necessary for the combination. Finding references anticipating or making obvious one does not necessarily render the other unpatentable. Having to examine the other is a burden. If the combination and subcombination of the above example are not patentably distinct no burden is presented in examining both since if one falls the other falls as well. **Admission on the record that the groups are not patentably distinct will result in rejoinder.**

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 122-130 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention and/or Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on March 10, 2005 and April 8, 2005.

3. The information disclosure statement filed September 30, 2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because it contains a photo-

copy of an initialed and signed IDS that has not been considered in the instant application. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Any resubmission must contain blank fields for the Examiner to initial and sign to indicate consideration in the instant application. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

4. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 or 35 U.S.C. 365(c) as follows:

a. It is noted that this application appears to claim subject matter disclosed in prior Application No. PCT/DK99/00391, filed July 8, 1999. A reference to the prior application must be inserted as the first sentence of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. Also, the current status of all nonprovisional parent applications referenced should be included.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional. The petition should be directed

to the Office of Petitions, Box DAC, Assistant Commissioner for Patents, Washington, DC 20231.

b. If applicant desires priority under 35 U.S.C. 120 or 35 U.S.C. 365(c) based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. ____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage

commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional. The petition should be directed to the Office of Petitions, Box DAC, Assistant Commissioner for Patents, Washington, DC 20231.

5. In as much as a process of producing the multi-point probe including producing the conductive probe arms on supporting wafer body in facial contact with the supporting wafer body and removal of a part of said wafer body providing the supporting body and providing the conductive probe arms freely extending from the supporting body as mentioned in claim 65 has been considered, such a process is not deemed to materially and physically change the limitations of the claimed apparatus.

Moreover, the process of producing as mentioned in claims 71 and 96 are not considered to materially and physically change the limitations of the claimed apparatus.

**PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE MANIPULATIONS OF
THE RECITED STEPS, ONLY THE STRUCTURE IMPLIED BY THE STEPS**

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

Additionally, Applicants made an election in response to the restriction mailed on February 7, 2005 by electing an Invention drawn to an Apparatus, not to an Invention drawn to a method of making.

For purposes of examination, **no patentable weight has been given to claimed recitations of process of making or producing.**

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second multitude of areas being "swaged" (claims 66, 69, 70), the second multitude of areas being "elevated" (claims 67, 69), the second multitude of areas being "co-planar" (claims 68, 69), the first multitude of conductive probe arms having "enlarged circular elements extending from the distal ends" (claim 84), the first multitude of conductive probe arms having "elliptic elements extending from the distal ends" (claim 85), the first multitude of

conductive probe arms having orthogonal squared elements extending from the distal ends" (claim 86), and "a third multitude of conductive tip elements extending from the distal end of the first multitude of conductive probe arms" (claim 96) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. Claims 66-71, 96-111, 112-121 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable

Art Unit: 2829

one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Due to the deficiency of the drawings to clearly indicate certain aspects of the claimed subject matter, one having ordinary skill in the art cannot perceive the structural arrangement and Applicants' geometrical relationship between each of the claimed elements to which the invention is drawn.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 65-70, 72, 76, 82-86, 91-96, 97, 104-111 and 120-121 are rejected under 35 U.S.C. 102(e) as being anticipated by Khandros et al (5900738).

Khandros et al (5900738) anticipates a multi-point probe (Figure 11 showing one of many; see also col 6, ln 20-25) for testing electric properties on a specific location of a test sample, comprising:

a supporting body (102) defining a first surface; and

a first multitude of conductive probe arms (186), each of said conductive probe arms defining a proximal end and a distal end and positioned in co-planar relationship with said first surface of said supporting body, and said conductive probe arms being

connected to said supporting body at said proximal ends thereof and having said distal ends freely extending from said supporting body, giving individually flexible motion to said first multitude of conductive probe arms (col 9, ln 30-58);

said conducting probe arms originating from a *process of producing* said multi-point probe, including producing said conductive probe arms on supporting wafer body in facial contact with said supporting wafer body and removal of a pad of said wafer body providing said supporting body and providing said conductive probe arms freely extending from said supporting body, and

a second multitude of conductive electrodes (Figure 12; 197) being positioned on second multitude of areas defined on said first surface between the first multitude of conductive probe arms, and comprising an insulating spacing (196) between the electrodes and the conductive probe arms, the second multitude of conductive especially being suitable for active guarding (col 9, ln 59 - col 10, ln 11); as recited in claim 65.

As to claims 66-70, 72, 76, 82-86, 91-95, 97, 104-111 and 120-121, such limitations are considered inherent within the scope of Khandros et al because Khandros et al teach multiple embodiments of contact structures for interconnections, interposers and semiconductor assemblies.

As to claim 96, Khandros et al anticipates (embodiment of Figure 3) a third multitude of conductive tip elements (139) extending from the distal end of the first multitude of conductive probe arms; and

Said conductive tip elements, originating from a *process of metallization* of electron beam depositions on the first multitude of conductive probe arms at the distal ends thereof.

10. Claims 65-121 are rejected under 35 U.S.C. 102(e) as being **clearly** anticipated by Eldridge et al (6482013).

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2829

13. Claims 74, 75, 77-81, 87-90, 98-103, 109-110 and 112-119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khandros et al (5900738).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further limited the invention as described in claims 74, 75, 77-81, 87-90, 98-103, 109-110 and 112-119 because the limitations demonstrate limiting conditions which can be determined by routine experimentation and are considered to be within the scope of the invention as disclosed in Khandros et al.


Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 C.C.P.A. (Patents) 1250, 156 F. 2d 239, 70 USPQ 412 ; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F. 2d 986, 38 USPQ 213 ; Allen et al. v. Coe, 77 App. D. C. 324, 135 F. 2d 11, 57 USPQ 136.

14. A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (571) 272-1963. The Examiner's Supervisor, Nestor R. Ramirez, can be reached at (571) 272-2034. For an automated menu of Tech Center 2800 phone numbers call (571) 272-2800.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
April 28, 2005



VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
04/29/05